NAVY TRAINING SYSTEM PLAN

FOR THE

SHIPBOARD AIR TRAFFIC CONTROL COMMUNICATIONS SYSTEM

N88-NTSP-A-50-0003/I

MAY 2000

SHIPBOARD AIR TRAFFIC CONTROL COMMUNICATIONS SYSTEM

EXECUTIVE SUMMARY

This Navy Training System Plan (NTSP) has been developed to identify the manpower, personnel, and training requirements associated with the Shipboard Air Traffic Control Communications (SATCC) System. The SATCC System is a Non-Developmental Item obtained through Commercial Off-The-Shelf procurement. It is scheduled to reach Milestone III (Production or Deployment Approval) of the Weapons System Acquisition Process in October 2000.

The SATCC System provides intercom, interphone, and radio communications switching via digitized voice and data busses aboard Aircraft Carriers (CV), Nuclear Aircraft Carriers (CVN), Landing Ships Helicopter Assault (LHA), and Multipurpose Amphibious Assault Ships (LHD). Installation has been completed aboard two CVNs. Initial operating capability was achieved in Fiscal Year (FY) 98. Installation aboard the remaining CVs and CVNs is scheduled between FY00 and FY03. An installation schedule for LHA and LHD class ships has not been published as of the date of this document.

The SATCC System is operated by Air Traffic Controllers (AC), the Carrier Control Approach Officer, Landing Signal Officers (LSO), the Mini Boss, the Air Boss, the Air Operations Officer, and the Assistant Air Operations Officer primarily. Additional communication devices are provided to Operations Specialists in Combat Direction Center (CDC) or Combat Information Center (CIC), the Commanding Officer, the Officer of the Deck etc.

Maintenance of the SATCC System is performed at two levels: organizational and depot. Installed SATCC Systems are currently maintained by Electronics Technicians (ET) with two different Navy Enlisted Classification (NEC) codes. A decision will be made during the SATCC System NTSP conference (scheduled for first quarter FY01) as to which NEC will be assigned the maintenance responsibility for the SATCC System. The two NECs under consideration are ET 1425, Communications Equipment (AN/WSC3/UHF Demand-Assigned Multiple Access) Technician, and ET 1568 (AN/TPX-42A(V) Shipboard Direct Altitude Indicator Readout Maintenance Technician).

Initial operator training consists of Computer-Based Training (CBT) provided by the Program Office, Naval Sea Systems Command (NAVSEA). Additionally, Space and Naval Warfare Systems Center, Charleston, Detachment Norfolk, In-Service Engineering Activity personnel conduct familiarization training and On-the-Job Training (OJT) prior to and during the initial at-sea period. Until follow-on maintenance training is established, in addition to providing CBT and OJT, NAVSEA will fund two maintenance technicians from each activity receiving the SATCC System to attend maintenance training at the Federal Aviation Administration Academy.

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Follow-on operator training will be incorporated into existing courses for ACs, LSOs, Mini Boss, and Air Boss. The remaining operators will receive training via Personnel Qualification Standards (PQS) and OJT.

A follow-on SATCC System maintenance training concept has not been adopted. This decision will also be made during the SATCC System NTSP Conference. The three concepts being considered are:

- Incorporate SATCC System maintenance information into existing ET "A" school or ET "C" school courses.

- Develop a stand-alone, Navy organic, SATCC System maintenance course that would award a new secondary NEC 14XX, SATCC System Maintenance Technician.

- Continue to utilize existing FAA Academy for SATCC System Maintenance training.

Research and analysis suggests that the selection of FAA maintenance training would be the best option for the Navy, because it would be the most cost-effective and it would not generate instructor billet requirements. It would eliminate course development costs and negate the requirement for establishing space in existing Navy organic training facilities and instructor billets. It would, however, require negotiation and concurrence with the FAA.

Introduction of the SATCC System will not drive an increase in operator manpower requirements. An increase in maintenance manpower and instructor manpower requirements could occur, depending on which NEC is selected to perform organizational level maintenance and which follow-on maintenance option is selected.

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LIST OF ACRONYMS

AC	Air Traffic Controller
ASW	Anti-Submarine Warfare
ATC	Air Traffic Control
CAG	Carrier Air Group
CATCC	Carrier Air Traffic Control Center
CBT	Computer-Based Training
CCA	Carrier Control Approach
CDC	Combat Direction Center
CIC	Combat Information Center
CICWO	Combat Information Center Watch Officer
CIN	Course Identification Number
CM	Corrective Maintenance
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COTS	Commercial Off-The-Shelf
CV	Aircraft Carrier
CVN	Nuclear Aircraft Carrier
DAIR	Direct Altitude Indicator Readout
DAMA	Demand-Assigned Multiple Access
ET	Electronics Technician
FAA	Federal Aviation Administration
FRS	Fleet Readiness Squadron
FTC	Fleet Training Center
FY	Fiscal Year
HIS	Human System Integration
ISEA	In-Service Engineering Activity
LHA	Landing Ship Helicopter Assault
LHD	Multipurpose Amphibious Assault Ship
LRU	Lowest Repairable Unit
LSO	Landing Signal Officer

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LIST OF ACRONYMS

MAG	Marine Air Group
MCAS	Marine Corps Air Station
MCCDC	Marine Corps Combat Development Center
MRC	Maintenance Requirements Cards
NA	Not Applicable
NAS	Naval Air Station
NATTC	Naval Air Technical Training Center
NDI	Non-Developmental Item
NEC	Navy Enlisted Classification
NTSP	Navy Training System Plan
OJT	On-the-Job Training
OOD	Officer Of the Deck
OS	Operations Specialist
OPNAV	Office of the Chief of Naval Operations
OPO	OPNAV Principal Official
PICT	Programmable Integrated Communications Terminal
PM	Preventive Maintenance
PMA	Program Manager, Air
PQS	Personnel Qualification Standards
RDVS	Rapid Deployable Voice Switch
RFT	Ready For Training
SATCC	Shipboard Air Traffic Control Communications
TBD	To Be Determined
TD	Training Device
TED	Touch Entry Display
TTE	Technical Training Equipment
UHF	Ultra High Frequency
UW	Under Way

SHIPBOARD AIR TRAFFIC CONTROL COMMUNICATIONS SYSTEM

PREFACE

This is the first iteration of the Initial Navy Training System Plan (NTSP) for the Shipboard Air Traffic Control Communications (SATCC) System. This Initial NTSP is a product of the Training Planning Process Methodology, as outlined in Office of the Chief of Naval Operations (OPNAV) Publication P-751-3-9-97. This document explores the various employment and support alternatives currently under consideration. Since it is the first NTSP and still relatively early in the development process, some definitive data was unavailable for inclusion in this version.

This NTSP identifies two manning concepts for maintenance personnel and three training concepts for maintenance personnel. The final manning and training concepts will be determined during the SATCC System NTSP Conference tentatively scheduled for first quarter Fiscal Year (FY) 01.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. Nomenclature-Title-Acronym. Shipboard Air Traffic Control Communications (SATCC) System

2. Program Element. 024112N

B. SECURITY CLASSIFICATION

1. System Characteristics ..... Unclassified
2. Capabilities ..... Unclassified
3. Functions..... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor..... CNO (N88)

OPO Resource Sponsor ..... CNO (N85)

Developing Agency..... NAVSEA (53Z)

Training Agency ..... CINCLANTFLT
CINCPACFLT
CNET

Training Support Agency..... NAVAIRSYSCOM (PMA205)

Manpower and Personnel Mission Sponsor ..... CNO (N12)
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training..... CNO (N7)

Marine Corps Force Structure..... MCCDC (C53)

D. SYSTEM DESCRIPTION

1. Operational Uses. The SATCC System uses the FAA's Rapid Deployable Voice Switch (RDVS) as its basic building block, and coupled with Programmable Integrated Communications Terminals (PICT), provides intercom, interphone, and radio communications

switching via digitized voice and data busses aboard Aircraft Carriers (CV) and Nuclear Aircraft Carriers (CVN). The system provides voice communications between Air Traffic Control (ATC) operator positions and the following:

- Other ATC operator positions in the warfare center, through the intercom functions
- Command and control positions throughout the ship, through the interphone function
- Aircraft, through the radio function
- Shipboard telephone system and other interior communication systems

At some future date, the SATCC System will also be installed on Helicopter Assault Landing Ships (LHA) and Multipurpose Amphibious Assault Ships (LHD).

2. Foreign Military Sales. No foreign military sales are currently planned for the SATCC System. The United States Army and the Federal Aviation Administration (FAA) currently employ a version of the SATCC System.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. Since the SATCC System is a Commercial Off-The-Shelf (COTS) Non-Developmental Item (NDI), no developmental testing was conducted. Operational testing was successfully completed aboard the USS Enterprise in 1998 and USS Harry S. Truman in 2000 which included first generation LSO terminals and terminals installed in Primary Flight Control (Pri-Fly). The only modification made to the COTS equipment was to harden the components for shipboard environment.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The SATCC System is a direct replacement for the OJ-314 (V) Voice Communication Switch and communication devices on the Landing Signal Officer (LSO) platform and Pri-Fly.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The SATCC System is an integrated voice switching system that provides both air-to-ground and ground-to-ground connectivity to support the ATC voice communication function. The SATCC System will permit simultaneous operation of all operational positions to either make radio transmissions, place calls, receive calls, or all. The SATCC System consists of terminals located at each operator position, which will control the communications switching equipment located in an equipment room. The SATCC System is modular in design and will accommodate up to 180 operator terminals located throughout the ship.

2. Physical Description

a. Equipment Room. The equipment room consists of multiple components housed in an equipment rack as follows:

COMPONENT	QUANTITY	DIMENSIONS (INCHES) HEIGHT	WIDTH	DEPTH	WEIGHT (POUNDS)
Uninterruptible Power Supply	1	72.0	22.3	26.00	1,100
By-Pass Switch	1	17.0	12.0	7.00	20
3080G Switch	1	72.0	44.6	26.00	1,340
Touch Entry Display (TED)	1	15.5	10.0	14.60	20
PICT	1	7.5	7.5	5.87	8

b. Operator Locations. In addition to the TED and PICT in the equipment room, there are additional TEDs and PICTs located at operator sites throughout the ship. The physical dimensions and weight of these units are the same as those located in the equipment room. TEDs are terminals used by controllers working radar display consoles and supervisors in CATCC. PICTs are used by status board operators, data display operators, Combat Information Center (CIC)/Combat Direction Center (CDC) operators, and persons in a command and control position.

3. New Development Introduction. The SATCC System is an NDI that was introduced to the fleet through COTS procurement.

4. Significant Interfaces. The SATCC System interfaces with Ship's Service Telephone System, Sound Powered Phone System, ATC radios via Black Secure Voice Switch, ATC voice, and video recorder and flight deck camera.

5. New Features, Configurations, or Material. Not Applicable (NA)

H. CONCEPTS

1. Operational Concept. The SATCC System is operated in various locations throughout the ship as follows:

POSITION	OPERATOR	ITEM	QUANTITY	LOCATION
Carrier Control Approach (CCA) Officer	639X	TED	1	Carrier Air Traffic Control Center (CATCC)-CCA
CCA Supervisor	Air Traffic Controller (AC)	TED	1	CATCC-CCA
Marshall Controller	AC	TED	1	CATCC-CCA
Departure Controller	AC	TED	1	CATCC-CCA
Approach Controller “A”	AC	TED	1	CATCC-CCA
Approach Controller “B”	AC	TED	1	CATCC-CCA
Final Controller “A”	AC	TED	1	CATCC-CCA
Final Controller “B”	AC	TED	1	CATCC-CCA
Air Operations (Air Ops) Supervisor	AC	TED	1	Air Ops
Air Boss	13XX	TED	1	Pri-Fly
Mini Boss	13XX	TED	1	Pri-Fly
Carrier Air Group (CAG) LSO	13XX	TED	1	LSO Platform
LSO	13XX	TED	1	LSO Platform
Pri-Fly Supervisor	AC	PICT	1	Pri-Fly
Visual Display Board (VDB) Operator	AC	PICT	1	CATCC-CCA
Marshall Input Operator	AC	PICT	1	CATCC-CCA
Approach Input Operator	AC	PICT	1	CATCC-CCA
Status Board Operator	AC	PICT	1	Air Ops
Land Launch Record Keeper/Data Input Operator	AC	PICT	1	CATCC-Air Ops
Air Ops Officer	13XX	PICT	1	Air Ops
Assistant Air Ops Officer	13XX	PICT	1	Air Ops
Strike Control Operator	Operations Specialist (OS)	PICT	1	CDC

POSITION	OPERATOR	ITEM	QUANTITY	LOCATION
Air Intercept Control Operator	Various	PICT	1	CDC
Tactical Action Officer	13XX	PICT	1	CDC
Anti Submarine Warfare (ASW) Control Operator	OS	PICT	1	CDC
Sub Surface Control Operator	OS	PICT	1	CDC
Commanding Officer	Various	PICT	1	Bridge
Officer Of the Deck (OOD)	Various	PICT	1	Bridge

2. Maintenance Concept. SATCC System maintenance is based on two levels of maintenance: organizational and depot.

a. Organizational. Organizational level maintenance of the SATCC System is currently performed by Navy personnel in the Electronic Technicians (ET) rating. The ETs performing maintenance on CVN-75 have Navy Enlisted Classification (NEC) code 1568 (AN/TPX-42(V) Shipboard Direct Altitude Indicator Readout (DAIR) Maintenance Technician). ETs performing maintenance on CVN-65 have NEC 1425 (Communications Equipment AN/WSC-3/Ultra High Frequency (UHF) Demand-Assigned Multiple Access (DAMA) Technician).

(1) Preventive Maintenance. Preventive Maintenance (PM) of the SATCC System is limited to cleaning, measuring, testing, and corrosion prevention. Apart from "general housekeeping," cleaning and corrosion prevention is performed on an annual schedule in accordance with the preliminary Maintenance Requirements Cards (MRC). Measurements are taken and tests are conducted during monthly and quarterly maintenance checks and as required.

(2) Corrective Maintenance. Corrective Maintenance (CM) of the SATCC System includes fault isolation and replacement to the Lowest Repairable Unit (LRU), connector repair, and handset piece part replacement. The LRU for the switch and TED is defined to be the module. The LRU for the PICT is the entire unit, with the exception of the knobs.

b. Intermediate. NA

c. Depot. A depot level maintenance plan has not been established at this time; however, a decision will be made no later than fourth quarter FY00. When this information becomes available it will be included in future updates to this NTSP. The depot plan will address

the three major components: the 3080G switch, TED, and PICT. Direct Vendor Delivery methodology will be considered for each of these components.

d. Interim Maintenance. Interim maintenance support will be available on an as-required basis through the In-Service Engineering Activity (ISEA). Message traffic will be provided to inform the Fleet of how interim maintenance will be conducted.

e. Life-Cycle Maintenance Plan. The design of the SATCC System is such that, when properly maintained, it will support continuous operation throughout its projected ten-year service life.

3. Manning Concept

a. Estimated Maintenance Man-Hours per Operating Hour. No sufficient fleet CM data for the SATCC System can be collected to accurately assess the maintenance workload; therefore, the following estimated maintenance man-hour data is provided. PM hours have been calculated using the estimated man-hours identified for each task in the MRC deck. Actual fleet maintenance man-hour data will be used to update this NTSP when the data becomes available.

RATE	NEC	PM HRS PER WK	CM HRS PER WK	TOTAL HRS PER WK
ET1	TBD	0.00	0.25	0.25
ET2	TBD	0.00	0.25	0.25
ET3	TBD	0.61	0.00	0.61
ETSN	TBD	0.35	0.00	0.35
Total:		**0.96**	**0.50**	**1.46**

b. Proposed Utilization. The SATCC System is maintained in an up and operating status 24 hours per day, seven days per week. The only time the system is taken down is during extended periods of ship inactivity such as a yard period or for annual cleaning and inspection.

c. Recommended Qualitative and Quantitative Manpower Requirements

(1) Operator. There are no billets dedicated solely to the operation of the SATCC System. The personnel who operate the SATCC System are filling watch station requirements and would be required even if the SATCC System did not exist.

(2) Maintenance. Two SATCC System maintenance technicians will be required at each activity. The SATCC System is currently installed aboard two CVNs, the USS Enterprise and the USS Harry S. Truman. Aboard the USS Enterprise, SATCC System maintenance is performed by ETs with NEC 1425, Communications Equipment (AN/WSC-3/UHF DAMA) Technician. Aboard the USS Harry S. Truman, the SATCC System is maintained by ETs from the radar shop, with NEC 1568.

Two primary maintenance NECs have been identified as candidates to receive the responsibility for maintenance of the SATCC System. They are ET 1425 and ET 1568. A decision will be made during the NTSP conference scheduled for first quarter FY01 as to which one of the two primary NECs will be assigned the maintenance responsibility.

The following factors were identified during the development of this Initial NTSP.

- The SATCC System is primarily an air-to-ground communications system that passes audio to the ship's external communications suite. NEC 1425 is an exterior communications NEC. NEC 1568 is a radar related NEC. It is logical to maintain the segregation of the maintenance of these two related but different types of equipment.

- The NEC 1568 Technician assigned to the CATCC cannot leave CATCC during Condition III flight operations. If the SATCC System requires maintenance outside the physical confines of CATCC during this time, a second NEC 1568 technician must be used, thus doubling the manpower requirement during Condition III flight operations. This is, however, the NEC that currently maintains the outgoing OJ-314 system. Personnel resources already existing and assigned to the OJ-314 are proposed to be allocated to SATCC.

- One of the follow-on training options discussed in this NTSP is for prospective SATCC System maintenance technicians to attend an existing FAA school that provides organizational level SATCC System Maintenance training. A prerequisite of this FAA school is for the student to have formal training in radio transceiver maintenance. Both NECs meet this requirement.

4. Training Concept. Until follow-on training is established, Naval Sea Systems Command (NAVSEA) and Space and Naval Warfare Systems Center (SPAWARSYSCEN) ISEA personnel is providing initial operator and maintenance training to personnel at each activity receiving the SATCC System. Follow-on operator training for the ACs, LSOs, Mini Boss, and Air Boss will be accomplished by adding SATCC System information to existing operator courses. All other operator personnel will accomplish follow-on training by completing Personnel Qualification Standards (PQS) and On-the-Job Training (OJT). The follow-on maintenance training concept has not been decided upon. Follow-on maintenance training options are outlined below.

a. Initial Training

(1) Operator. Initial operator training consists of Computer-Based Training (CBT) delivered to the ship by the Program Office, NAVSEA, in Compact Disk-Read Only Memory format during the initial installation. In addition to CBT, familiarization training is conducted with each work center, and SPAWARCEN ISEA personnel provide OJT during the initial underway period. Quick reference guides are provided to the work centers along with vendor-supplied user's manuals.

(2) Maintenance. During the installation of the SATCC System aboard the USS Enterprise in 1997, one ET with NEC 1425 attended maintenance training at the factory and later attended the FAA Academy in Oklahoma City, Oklahoma. Prior to installation of the SATCC System aboard the USS Harry S. Truman in 1999, one ET with NEC 1568 observed the construction of a SATCC System and was trained at the contractor's facility in Gaithersburg, Maryland. Additionally, maintenance CBT was provided by NAVSEA to the maintenance work center and extensive maintenance OJT was conducted by ISEA personnel during the initial underway period. In the future, until follow-on maintenance training is established, NAVSEA will fund two maintenance technicians from each activity receiving the SATCC System to attend RDVS (SATCC is the Navy term) maintenance training at the FAA Training Academy in addition to the CBT and OJT described above.

Title ..... Rapid Deployable Voice Switch IIA Training

CIN 40042

Course Manager .. FAA

Description ..... This course is designed for Army, Navy, and FAA civilian Electronics Technicians. It covers the operation, troubleshooting, component replacement, and preventive maintenance procedures required to maintain the 3080 RDVS. Upon completion, the student will be able to perform as an organizational level SATCC System maintenance technician with little or no supervision.

Location ..... FAA Academy, Oklahoma City

Length ..... 10 days

RFT date ..... Currently available

Skill identifier ..... Certified FAA RDVS System Maintenance Technician

TTE/TD ..... NA

Prerequisite ..... Formal training in radio transceiver maintenance

b. Follow-on Training

(1) Operator

(a) Air Traffic Controller. SATCC System operator information for AC personnel will be incorporated into existing ATC courses at Naval Air Technical Training Center (NATTC) Pensacola, Florida. No addition to current course lengths is anticipated. No target Ready-For-Training (RFT) dates for these updated courses have been established.

Title ..... Carrier Air Traffic Control Center Operations

CIN C-222-2012

Model Manager ... NATTC Pensacola

Description ..... This course provides AC personnel with the basic knowledge and skills necessary to perform CATCC team member air operations readiness, watch station, and system operations functions with routine supervision during air operations evolutions aboard CV and CVN type ships.

Locations ..... NATTC Pensacola

Length ..... 40 days

RFT date ..... Currently available

Skill identifier ..... AC 6902

TTE/TD ..... NA

Prerequisite ..... C-222-2010, Air Traffic Controller “A” School

Title ..... Amphibious Air Traffic Control Center Operations

CIN C-222-2019

Model Manager ... NATTC Pensacola

Description ..... This course provides AC personnel with the basic knowledge and skills necessary to perform CATCC team member air operations readiness, watch station, and system operations functions with routine supervision during air operations evolutions aboard LHA and LHD type ships.

Locations ..... NATTC Pensacola

Length ..... 40 days

RFT date ..... Currently available

Skill identifier ..... AC 6903

TTE/TD ..... NA

Prerequisite ..... C-222-2010, Air Traffic Controller “A” School

(b) Landing Signal Officer. SATCC System operator information for Navy LSOs will be incorporated into existing LSO courses at Naval Air Station (NAS) Oceana, Virginia. No addition to current course lengths is anticipated. No target RFT dates for these updated courses have been established. Marine Corps LSO designation is earned by completing an LSO training syllabus currently available at Marine Air Group (MAG)-14, Marine Corps Air Station (MCAS) Cherry Point, North Carolina; and MAG-13, MCAS El Toro, California. SATCC System operator information will be added to these non-formal courses.

Title ..... Landing Signal Officer Initial Formal Ground Training

CIN D-2G-0001

Model Manager ... COMNAVAIRLANT

Description ..... This course introduces LSO trainees to the administrative and operational responsibilities of an LSO, including ship-based equipment, glide slope geometry, aircraft recovery bulletins, aircraft characteristics, waving concepts and techniques, and conduct of field carrier landing practice. Upon completion, the student will be able to perform as an LSO under direct supervision.

Locations ..... NAS Oceana

Length ..... 10 days

RFT date ..... Currently available

Skill identifier ..... CV or CVN LSO

TTE/TD ..... NA

Prerequisite ..... Designated as an LSO Trainee in accordance with LSO Naval Air Training and Operating Procedures Standardization (NATOPS)

Title ..... Landing Signal Officer Advanced Formal Ground Training

CIN D-2G-0002

Model Manager ... COMNAVAIRLANT

Description ..... This course provides prospective airwing staff LSOs with advanced classroom and simulator training. Upon completion, the student will be able to perform as a CAG LSO with no supervision.

Locations ..... NAS Oceana

Length ..... 3 days

RFT date ..... Currently available

Skill identifier ..... CAG LSO

TTE/TD ..... NA

Prerequisites ..... ° D-2G-0001, Landing Signal Officer Initial Formal Ground Training
° Designated LSO

Title ..... Landing Signal Officer Fleet Readiness Squadron and Training Command Squadron

CIN D-2G-0003

Model Manager ... COMNAVAIRLANT

Description ..... This course provides LSOs assigned to Fleet Readiness Squadrons (FRS) and Training Command Squadrons advanced formal classroom and simulator training. Upon completion, the student will be able to perform as an LSO assigned to FRS or training squadron with no supervision.

Locations ..... NAS Oceana

Length ..... 3 days

RFT date ..... Currently available

Skill identifier ..... FRS LSO or Training Command Squadron LSO

TTE/TD ..... NA

Prerequisites ..... ° D-2G-0001, LSO Initial Formal Ground Training
° Designated LSO

(c) Air Boss and Mini Boss. Mini Boss and Air Boss candidates are required to attend a two-day LSO indoctrination seminar at the LSO School, NAS Oceana. SATCC System Operator information will be included in this seminar.

(d) Air Operations and Combat Direction Center Personnel. Air Ops and CDC personnel, including the Air Ops Officer, Assistant Air Ops Officer, Strike Control Officer, Air Intercept Control Officer, Tactical Action Officer, ASW Officer, and Sub-Surface Control Officer receive required SATCC System operator training by completing the applicable PQS.

(e) Bridge Personnel. Bridge Personnel, including the Commanding Officer and Officer Of the Deck, obtain SATCC System operator training through OJT and any applicable PQS.

(2) Maintenance. A follow-on SATCC System maintenance training concept has not been adopted. This decision will be made during the SATCC System NTSP Conference scheduled for first quarter FY01. Currently, there are three concepts being considered.

(a) Concept 1. Incorporate SATCC System maintenance information into the existing ET 1425 or ET 1568 course. As discussed earlier in this document, a decision as to which ET NEC will maintain the SATCC System has not been made. Depending on that decision, one of the following two courses would be modified to include SATCC System Maintenance information. The addition of SATCC System information will increase the course length by approximately 10 days. No projected RFT date has been established. One SATCC System would be required as Technical Training Equipment (TTE). One set of pre-faulted modules would be required as Training Devices (TD).

Title ..... UHF Systems Technician

CIN A-101-0138

Model Manager ... Fleet Training Center (FTC) Norfolk, Virginia

Description ..... This course provides maintenance training to ETs. This course covers the operation, troubleshooting, preventive maintenance, and component removal and replacement procedures associated with the maintenance of the AN/WSC-3 Communications Set, OA-9123/SRC Antenna Coupler, OE-82 (series) Antennas, the DAMA System, the Officer-in-Tactical Command Information Exchange Subsystem, and the Tactical Data Information Exchange Subsystem. Upon completion, the student will be able to perform as a UHF systems maintenance technician with limited supervision.

Locations ..... ° FTC Norfolk
° FTC San Diego, California

Length ..... 75 Days

RFT date ..... Currently available

Skill identifier ..... ET 1425

TTE/TD ..... NA

Prerequisites ..... ° A-100-0138, Electronics Technician Core "A" School
° A-100-0140, Electronics Technician Strand "A" School

Title ..... AN/TPX-42(V) Shipboard DAIR

CIN C-103-2054

Model Manager ... NATTC Pensacola

Description ..... This course provides maintenance training to ETs. This course covers the operation, troubleshooting, preventive maintenance, and component removal and replacement procedures associated with the maintenance of the AN/TPX-42A(V)8/12/13 Shipboard DAIR System. Upon completion, the student will be able to perform as a DAIR maintenance technician with limited or no supervision.

Locations ..... NATTC Pensacola

Length ..... 103 days

RFT date ..... Currently available

Skill identifier ..... ET 1568

TTE/TD ..... NA

Prerequisites ..... ° A-100-0138, Electronics Technician Core "A" School
° A-100-0140, Electronics Technician Strand "A" School

Note: This course is part of track C-103-2055, AN/TPX-42A(V) Shipboard DAIR Maintenance Technician Pipeline.

(b) Concept 2. Develop a stand-alone SATCC System maintenance course that would award a new secondary NEC 14XX, SATCC System Maintenance Technician.

Title ..... SATCC System Maintenance Technician

CIN ..... C-XXX-XXXX

Model Manager ... To Be Determined (TBD)

Description ..... This course provides maintenance training to ETs. This course covers the operation, troubleshooting, preventive maintenance, and component removal and replacement procedures associated with the maintenance of the SATCC System. Upon completion, the student will be able to perform as a SATCC System maintenance technician with limited or no supervision.

Locations ..... TBD

Length ..... 10 days (estimated)

RFT date ..... TBD

Skill identifier ..... Secondary NEC ET 14XX

TTE/TD ..... One SATCC System as TTE. One set of pre-faulted module as TD.

Prerequisites ..... ° A-101-0138, UHF Systems Technician (or its equivalent/replacement system)

(c) Concept 3. Utilize existing FAA RDVS System Maintenance training. The FAA certification received upon completion of this course could be used as the criteria for awarding NEC 14XX to the student. This is the same course that is currently being used for initial SATCC maintenance training.

Title ..... Rapid Deployable Voice Switch IIA Training

CIN 40042

Model Manager ... FAA

Description ..... This course is designed for Army, Navy, and FAA civilian Electronics Technicians. It covers the operation, troubleshooting, component replacement, and preventive maintenance procedures required to maintain the Amecom 3080 RDVS. Upon completion, the student will be able to perform as an organizational level SATCC System maintenance technician with little or no supervision.

Locations ..... FAA Academy, Oklahoma City

Length ..... 10 days

RFT date ..... Currently available

Skill identifier ..... Certified FAA RDVS System Maintenance Technician

TTE/TD ..... NA

Prerequisites ..... Formal radio transceiver maintenance training

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AC 6902	° C-222-2010, Air Traffic Controller
AC 6903	° C-222-2010, Air Traffic Controller
ET 1425	° A-100-0138, Electronics Technician Core "A" School ° A-100-0140, Electronics Technician Strand "A" School
ET 1568	° A-100-0138, Electronics Technician Core "A" School ° A-100-0140, Electronics Technician Strand "A" School

d. Training Pipelines. If the concept to incorporate SATCC System training into existing training is selected, the track length of training track C-103-2055, AN/TPX-42A(V) Shipboard DAIR Maintenance Technician Pipeline will increase by approximately 10 days.

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development

a. Maintenance Training Improvement Program. NA

b. Aviation Maintenance In-Service Training. NA

c. Aviation Maintenance Training Continuum System. NA

2. Personnel Qualification Standards. The following Naval Education and Training (NAVEDTRA) PQSs will require updating with SATCC System operator information:

PERSONNEL QUALIFICATION STANDARD TITLE	PUBLICATION NUMBER
Surface Warfare Officer (Warfare/Combat Information Center Watch Officer (CICWO)/OOD Under Way (UW))	NAVEDTRA 43101-4E
Errata 1 for Surface Warfare Officer (Warfare/CICWO/OOD(UW))	NAVEDTRA 43101-4E/ERR

PERSONNEL QUALIFICATION STANDARD TITLE	PUBLICATION NUMBER
CV/CVN Undersea Warfare Module Analysis	NAVEDTRA 43205-7A
Tactical Support Center Mission Coordination and Evaluation Officer	NAVEDTRA 43206-0C
Tactical Support Center Operations Control Watch	NAVEDTRA 43206-5C
Combat Information Center Common Core Watch Station Qualification	NAVEDTRA 43311-4
Amphibious Warfare Command and Control	NAVEDTRA 43315-7
Surface/Subsurface Warfare Coordinator/Anti-Air Warfare Information	NAVEDTRA 43388-1A
CV/CVN Tower Operations	NAVEDTRA 43426-2C
CV/CVN OOD UW	NAVEDTRA 43496-1A
CV/CVN Air Traffic Control Center	NAVEDTRA 43496-6C
CV/CVN Advanced Combat Direction/Combat Direction Center	NAVEDTRA 43496-7A
CDC Watch Officer	NAVEDTRA 43553

3. Other Onboard or In-Service Training Packages. Each ship has a locally prepared watch station checklist that personnel must complete prior to being qualified as a watch stander on the bridge. As the SATCC System is installed on each ship, SATCC System operator information will be added to these checklists.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
Procurement action is pending	Litton Denro	9318 Gaither Road Gaithersburg, MD 20877

2. Program Documentation. NAVSEA is currently developing the Operational Requirements Document, Integrated Logistics Support Plan, Maintenance Plan, and other related program documents. When completed, this information will be included in future updates to this NTSP.

3. Technical Data Plan. NAVSEA is currently developing the required Maintenance Requirement Cards and Maintenance Index Page. Commercial operator and maintenance manuals will be utilized. In accordance with current directives, the primary maintenance manuals will be produced as Interactive Electronic Technical Manuals using the approved Standard Generalized Mark-up Language format. Until the Navy documents are completed, the following hard copy contractor-furnished manuals will be issued:

PUBLICATION TITLE	PUBLICATION NUMBER	EFFECTIVE DATE
Integrated Communications Switching System Model 3080G Operator's Manual	TPM9712100	18 December 1997
Integrated Communications Switching System Model 3080G Operations and Maintenance Manual	TPM9903201	31 March 1999
Integrated Communications Switching System Model 3080G System Generation Manual	TPM9904400	25 March 1999

4. Test Sets, Tools, and Test Equipment. No special test sets or special test equipment are required to support the SATCC System. All hand tools and common electronic test equipment required to support the SATCC System are currently available in the maintenance work center.

5. Repair Parts. Prior to the Material Support Date (currently in negotiation), the contractor provides repair parts for components still under warranty. The ship will be responsible for purchases of repair parts not under warranty. Procedures for accomplishing these actions will be provided by the ISEA via message.

6. Human Systems Integration. No formal Human System Integration (HSI) plan has been developed by the Navy for the SATCC System. The Navy has drawn from the HSI efforts put forth by the FAA in the development of the RDVS system, the FAA term for SATCC. Since the SATCC System is a COTS procurement action, the Navy had no additional HSI input into the hardware design, except those considerations during installation of the equipment to ensure units were positioned to provide ease of access for maintenance personnel and comfort of operation to the operators.

K. SCHEDULES

1. Installation and Delivery Schedules

ACTIVITY	PROCUREMENT DATE	INSTALLATION YEAR
CV 63 USS Kitty Hawk	November 1999	FY00
CVN 65 USS Enterprise	November 1997	FY98
CV 67 USS John F. Kennedy	December 2002	FY03
CVN 68 USS Nimitz	January 2001	FY01
CVN 69 USS Dwight D. Eisenhower	January 2000	FY01
CVN 70 USS Carl Vinson	November 2000	FY02
CVN 71 USS Theodore Roosevelt	November 2001	FY02
CVN 72 USS Abraham Lincoln	November 2000	FY01
CVN 73 USS George Washington	November 2002	FY03
CVN 74 USS John C. Stennis	March 2002	FY02
CVN 75 USS Harry S. Truman	August 1999	FY99
CVN 76 USS Ronald Reagan	March 2000	FY01
CVN 77	TBD	TBD
LHA 1 USS Tarawa	TBD	TBD
LHA 2 USS Saipan	TBD	TBD
LHA 3 USS Belleau Wood	TBD	TBD
LHA 4 USS Nassau	TBD	TBD
LHA 5 USS Peleliu	TBD	TBD
LHD 1 USS Wasp	TBD	TBD
LHD 2 USS Essex	TBD	TBD

ACTIVITY	PROCUREMENT DATE	INSTALLATION YEAR
LHD 3 USS Kearsarge	TBD	TBD
LHD 4 USS Boxer	TBD	TBD
LHD 5 USS Bataan	TBD	TBD
LHD 6 USS Bonhomme Richard	TBD	TBD
LHD 7 USS Iwo Jima	TBD	TBD

2. Ready For Operational Use Schedule. All systems will be ready for operational use upon completion of installation.

3. Time Required to Install at Operational Sites. Two months are required to install the SATCC System.

4. Foreign Military Sales and Other Source Delivery Schedule. NA

5. Training Device and Technical Training Equipment Delivery Schedule

a. Training Devices. No TDs will be required to support operator training. If the FAA Academy maintenance training option is selected for follow-on maintenance training, no TDs will be required. If establishment of Navy maintenance training is selected as the follow-on maintenance training option, a yet to be determined number of pre-faulted modules will be required six months prior to the first class convening date.

b. Technical Training Equipment. Computers that simulate the information sent to TEDs and PICTs will be used in place of the actual switch hardware for AC, LSO, Mini Boss, and Air Boss operator training. This computer program will be required six months prior to the first class convening date. If the FAA Academy maintenance training option is selected for follow-on maintenance training, no TTE will be required. If establishment of Navy maintenance training is selected as the follow-on maintenance training option, one SATCC System will be required. This TTE must be in place six months prior to the first class convening date.

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Enhanced Terminal Voice Switch Navy Training System Plan	A-50-9701/A	PMA213	Approved Apr 99
Shipboard Air Traffic Control Communications Operational Requirements Document	ACAT IV M	NAVSEA	Draft in-work
Integrated Communications Switching System Model 3080-G Operator's Manual	TPM9712100	Litton/Amecom	Dec 97
Command Control And Communications C3 Systems Threat Assessment	ONI-TA-009-95	Office of Naval Intelligence	Approved Jul 95

APPENDIX A - POINTS OF CONTACT

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